Office Supreme Court, U.
FILED
DEC 31 1934
CHARLES ELMORE CROP
CLERK

IN THE

Supreme Court of the United States

STATE OF WISCONSIN, STATE OF MINNESOTA, STATE OF OHIO, and STATE OF PENNSYLVANIA, *Complainants,* *vs.* STATE OF ILLINOIS and THE SANITARY DISTRICT OF CHICAGO, *Defendants.* STATE OF MISSOURI, STATE OF KENTUCKY, STATE OF TENNESSEE, STATE OF LOUISIANA, STATE OF MISSISSIPPI, and STATE OF ARKANSAS, *Intervening Defendants.*	No. 5, Original.
STATE OF MICHIGAN, *Complainant,* *vs.* STATE OF ILLINOIS and THE SANITARY DISTRICT OF CHICAGO, et al., *Defendants.*	No. 8, Original.
STATE OF NEW YORK, *Complainant,* *vs.* STATE OF ILLINOIS and THE SANITARY DISTRICT OF CHICAGO, et al., *Defendants.*	No. 9, Original.

SEMI-ANNUAL REPORT OF THE SANITARY DISTRICT OF CHICAGO OF JANUARY 1, 1935. MADE PURSUANT TO DECREE OF APRIL 21, 1930.

FRED KLEIN CO., 24 PRINTERS, CHICAGO.

IN THE

Supreme Court of the United States

NOS. 5, 8 AND 9, ORIGINAL.

OCTOBER TERM, 1933.

STATE OF WISCONSIN, STATE OF MINNESOTA, STATE OF OHIO, and STATE OF PENNSYLVANIA, *Complainants,* *vs.* STATE OF ILLINOIS and THE SANITARY DISTRICT OF CHICAGO, *Defendants.* STATE OF MISSOURI, STATE OF KENTUCKY, STATE OF TENNESSEE, STATE OF LOUISIANA, STATE OF MISSISSIPPI, and STATE OF ARKANSAS, *Intervening Defendants.*	No. 5, Original.
STATE OF MICHIGAN, *Complainant,* *vs.* STATE OF ILLINOIS and THE SANITARY DISTRICT OF CHICAGO, et al., *Defendants.*	No. 8, Original.
STATE OF NEW YORK, *Complainant,* *vs.* STATE OF ILLINOIS and THE SANITARY DISTRICT OF CHICAGO, et al., *Defendants.*	No. 9, Original.

SEMI-ANNUAL REPORT OF THE SANITARY DISTRICT OF CHICAGO OF JANUARY 1, 1935. MADE PURSUANT TO DECREE OF APRIL 21, 1930.

Pursuant to provisions of paragraph numbered 5 of the Decree in the above entitled causes, entered on April 21, 1930, the Defendant, The Sanitary District of Chicago, hereby makes its semi-annual report of January 1, 1935, as follows:

CONSTRUCTION PROGRAM.

In the semi-annual report of July 1, 1934, the status of completed work in the sewage treatment construction program involved in this case was stated to be on June 1, 1934, as follows:

TABLE 1.

COMPLETED WORK AS OF JUNE 1, 1934.

Calumet Project	$ 21,558,409.12
North Side Project	37,122,381.52
West Side Project	42,383,987.53
Southwest Side Project	326,205.71
West-Southwest Treatment Plant	159,000.17
Miscellaneous Plants and Sewers	596,188.86
Chicago River Controlling Works	53,415.74
Total	$102,204,588.65

TABLE 2.

FUTURE WORK AFTER JUNE 1, 1934.

Calumet Project	$ 13,612,000.00
North Side Project	5,375,000.00
West Side Project	12,460,000.00
West-Southwest Plant	42,538,000.00
Southwest Side Project	39,765,000.00
Miscellaneous Plants and Sewers	2,000,000.00
Chicago River Controlling Works (if necessary)	3,200,000.00
Total	$118,950,000.00

During the interim of six months between the date of the last report and the present report a considerable amount of construction work has been accomplished on the Calumet and West Side Projects. Reasonable progress has been made on the design and preparation of plans for the Southwest Side Project.

Calumet Project. Construction was continued on the following contracts mentioned in the last semi-annual report: the Calumet Pumping Station and Blower House, now 76 per cent completed; the Aeration Tanks, Operating Galleries, Final Settling Tanks, etc., now 77 per cent completed; the Preliminary Settling Tanks, Sludge Concentration Tanks,

Screen House, Meter Vault, etc., now 75 per cent completed; the Extension of the Pump Discharges, now 100 per cent completed; the Blower Units, now 70 per cent completed; and on the Harvey Sewer, now 54 per cent completed. Agreements for the resumption of work on the Sewage Pumping Units and on the Large Valves were made July 12, 1934. The Pumping Units were delivered in November and are being installed, the contract being 89 per cent completed. The Valves have been delivered and installed and this contract is 100 per cent completed. A contract for the Connecting Conduits between the old Calumet Pumping Station and the new Sewage Treatment Plant was awarded October 11, 1934 and actual work was started October 29, 1934. Contracts for the manufacture and delivery of the Diffuser Plates to be installed in the aeration tanks were awarded October 18, 1934 and this work is under way.

Preparation of plans for the Sludge Dewatering and Incinerating Plant mentioned in the last semi-annual report has been somewhat delayed. In August 1934 the Resident Projects Engineer (PWA) requested a report, reviewing studies previously made as to the relative merits and costs of (1) digestion of sludge and disposal on sand drying beds, (2) pumping sludge to the Southwest Side Plant and disposal there by dewatering and incineration, and (3) dewatering and incineration of sludge at the Calumet site, this latter proposition involving three alternate methods. Such a report was prepared and was studied by the Engineering Board for the Public Works Administration on November 9, 1934, and on November 21, 1934, authority was granted to

proceed with the preparation of plans and specifications. This work is being rushed to receive bids early in 1935 for the construction so that the plant may be ready to operate during the late summer of 1935. Plans for duct lines (power supply), water mains, roadways, grading, drainage, lighting, etc., are being prepared. Barring unforeseen difficulties, the entire project as presently planned, should be ready for operation by the fall of 1935. Certain sewers necessary to increase the delivery of sewage in the system will remain to be constructed whenever finances become available.

West Side Project. Construction was continued on the following contracts mentioned in the last semi-annual report: Battery C, etc., of the Imhoff Tanks, now 78 per cent completed; West Side Sewer, Contract 3, now 55 per cent completed; West Side Sewer, Contract 5, now 87 per cent completed; West Side Sewer, Contract 6, now 37 per cent completed; West Side Sewer Contract 7, now 34 per cent completed; West Side Sewer, Contract 8, now 80 per cent completed. An agreement for resumption of work on West Side Sewer, Contract 4, was made July 12, 1934 and actual work was started July 13, 1934. A contract for the construction of Section 9 of the West Side Sewer was awarded June 28, 1934 and actual work was started September 18, 1934. A contract for the construction of Section 10 of the West Side Sewer was awarded August 7, 1934 and actual work was started September 17, 1934. All of this work mentioned will easily be completed before the end of 1935 with the possible exception of Contract 4 of the West Side Sewer, on which the construction difficulties encountered have been considerable.

Operation of the experimental Sludge Filtering and Drying Unit at the West Side Sewage Treatment Works has been continued and considerable more progress made in the development of the process of disposal of sludge by mechanical dewatering and incineration.

West-Southwest Treatment Plant. Progress on the plans for the West-Southwest Sewage Treatment Plant has not been as rapid as was anticipated at the time of the last semi-annual report. The recommendations of the Engineering Board of the Public Works Administration, approved by the Administrator on May 10, 1934, were approved by the Board of Trustees of the Sanitary District May 17, 1934, as stated in the Special Supplementary Report to the Supreme Court, dated May 23, 1934, received and ordered filed May 28, 1934, and as stated in the last semi-annual report. There were, however, certain details of design upon which the Engineering Department of the Sanitary District and the Engineering Board of the Public Works Administration were not in complete accord. These items were set forth in a communication of the Chief Engineer of the Sanitary District to the Resident Projects Engineer (PWA) on June 16, 1934 and were reviewed by the Engineering Board (PWA) June 21 and 22, 1934. Further conferences resulted in agreement by August 17, 1934 on the capacities for which certain parts of the plant should be designed, after which date, definite layouts could be made.

The development of the process of dewatering and incineration of sludge at the experimental plant at the West Side Treatment Works progressed to a point where it has been found to be feasible to com-

bine steam generation with sludge incineration and thereby produce the power necessary to operate the entire plant more economically than by purchasing electrical energy. The proposed use of steam turbine driven units in place of electric driven units, previously proposed, was submitted to the Resident Projects Engineer (PWA) on July 17, 1934. A review of all the supporting data was requested by him on September 13, 1934 with comparative studies of the merits and costs of (1) dewatering and incineration of sludge with electric driven pumps and blowers, (2) dewatering and incineration of sludge with steam turbine driven pumps and blowers, (3) disposal of sludge by best method of digestion, and (4) digestion of sludge in heated tanks and subsequent dewatering and disposal of filter cake. The reports submitted by the District on this matter were considered by the Engineering Board (PWA) on November 10, 1934, at which time approval was given for the design of steam turbine driven pumps and blowers, though not as yet for the incineration process for the disposal of sludge. Definite approval awaits further development of the process in actual operation at the new Calumet plant. Specifications were prepared for Steam Turbine Driven Pumping and Blowing Units and advertisements and bids for the same were received December 27, 1934. The general plan of the Pumping Station and Blower House was approved by Engineers of the Public Works Administration November 23, 1934. The plans are now being rushed.

Preparation of plans for the Aeration Tanks, Operating Galleries, Final Settling Tanks, etc., has progressed slowly. Final approval of the proposed gen-

eral layout and location was obtained from engineers of the Public Works Administration on November 30, 1934. It is now anticipated that plans and specifications will be finished within the next two months.

Southwest Side Project. Satisfactory progress has been made on plans for the Southwest Side Intercepting Sewer. Field surveys have been completed, test pits have been dug along the route of the first four sections of the sewer from the Southwest Side Pumping Station to Racine Avenue. Right-of-way ordinances have been prepared for the City of Chicago and passed by the Sanitary District. Negotiations have been started toward the acquisition of certain necessary easements. A check has been made on the population and water use of the area served. The hydraulics of the entire intercepting sewer have been reviewed and a profile adopted. Plans and specifications have been prepared for one contract, namely, Section 2, for 8,100 feet of 18-foot sewer, upon which bids were received December 27, 1934. It is planned to have the first four Sections of this Sewer (75 per cent of the total work) under contract by June, 1935, and the remainder by the end of the year 1935. Progress on this sewer has been such that it can be completed before the earliest date on which the new Southwest treatment works will be ready to receive sewage.

Activated Sludge Patent Suit. The suit of Edgar C. Guthard, Activated Sludge, Ltd. and Activated Sludge, Inc., versus The Sanitary District of Chicago, in the United States District Court for the Northern District of Illinois, Eastern Division (In Equity No. 4280), mentioned in the last report to the Court, was

argued before Judge Lindley on March 27 and 28, 1934.

On October 18, 1934, Judge Lindley presented his opinion and findings in the Chicago case. He held that the four patents in the Milwaukee case were valid and infringed; that because of their resemblance, the U. S. patent No. 1,286,017 was also valid and infringed. He denied an injunction because of the health hazard. He further found the sixth patent, No. 1,341,561 invalid for want of invention.

A petition for a rehearing is now pending before Judge Lindley. No decree has been entered as yet.

The suit brought against Milwaukee, which was decided for the plaintiff, Activated Sludge, Inc., by Judge Geiger (Activated Sludge, Inc., versus the City of Milwaukee, in Equity No. 2323, Eastern District of Wisconsin) was decided by the U. S. Circuit Court of Appeals for the 7th Circuit (The City of Milwaukee, Defendant Appellant, versus Activated Sludge, Inc., Plaintiff Appellee, U. S. Circuit Court of Appeals, 7th Circuit, No. 5001) in favor of the Plaintiff Appellee, Activated Sludge, Inc., on March 2, 1934, except that it was reversed as to the injunction. A rehearing was denied on April 13, 1934.

The City of Milwaukee filed a petition with the U. S. Supreme Court for a writ of certiorari. This was denied on October 8, 1934.

Another suit has been brought by Activated Sludge, Inc. against the Milwaukee Sewerage Commission. An injunction was granted by the trial court. On appeal, the decree was reversed as to injunction by the United States Circuit Court of Appeals (69 F. (2) 594). Judge Geiger has entered a

decree in favor of the Plaintiff, from which an appeal is now being taken.

A further suit has been brought by Activated Sludge, Inc. against the Metropolitan Sewerage Commission in the Eastern District of Wisconsin, and also a suit has been brought by the same plaintiff against contractors and others furnishing supplies and parts for the Milwaukee plant.

While the suit against the Sanitary District has no direct bearing at present on the progress of the sewage treatment program, it is mentioned herein so that the Court may be advised of another element which tends to obstruct progress and may (if the patents are upheld) increase the cost of the works.

Packingtown Situation. A new suit was brought by the District against various firms in the Stockyards and Packingtown in the Circuit Court of Cook County by a bill filed on October 5, 1934, praying that pending the final hearing and disposition of this case, the various firms be enjoined from preventing the Sanitary District from inspecting the various plants in question and measuring and sampling the flow therefrom. As a result by agreement the right of inspection, sampling and gaging has been obtained. The field work will start early in 1935. Details of this survey are now being worked out with representatives of the Packing interests.

Financial. The financial condition of The Sanitary District of Chicago has changed but little since the time of the last report to the Court. The local tax situation has improved slightly. The amounts of taxes extended for the Sanitary District for the years 1928, 1929, 1930, 1931, 1932 and 1933 and the

amounts collected up to December 14, 1934, pursuant to these extensions, are as follows:

Year	Total Taxes Extended	Amount Collected	Amount Unpaid	Percentage Unpaid
1928.....	$ 19,448,392.46	$17,229,330.92	$ 2,219,061.54	11.41
1929.....	24,466,998.58	19,854,969.36	4,612,029.22	18.85
1930.....	22,453,699.40	16,386,709.82	6,066,989.58	27.02
1931.....	20,517,561.90	14,319,206.45	6,198,355.45	30.21
1932	19,281,643.24	11,580,554.91	7,701,088.33	39.94
1933.....	18,037,092.11	0.00	18,037,092.11	100.00
	$124,205,387.69	$79,370,771.46	$44,834,616.23	36.18

The 1933 real estate taxes were placed in collection just prior to the writing of this report. No figures are as yet available as to the amount of collections. These taxes are payable in two installments, the second of which does not become delinquent until May 1, 1935. The delinquent date for the second installment of the 1932 taxes was July 1, 1934, ten months earlier than the corresponding date for the 1933 taxes, so it can be seen that the collection dates are gradually being brought back to normal.

The amount, $79,370,771.46, shown in the foregoing table, is the amount of Sanitary District taxes collected by the County Collector. Of this amount, $75,316,656.30 has been turned over to the Sanitary District.

The taxes collected since the time of the last report to the Court amount to $5,668,379.85, which is about 4.5 per cent of the taxes levied and due. This money was used to redeem tax anticipation warrants, to pay current expenses and to pay defaulted interest on bonds. The non payment of these taxes has forced the Sanitary District, through lack of revenue, to default on practically all payments of maturing prin-

cipal on bonds used for construction work due from January 1, 1932 to December 17, 1934, inclusive, and a certain amount of interest on these bonds. The amounts in default, as of December 17, 1934, are:

Principal	$16,512,555.00
Interest	2,956,180.00
Total	$19,468,735.00

The interest in default amounted to a maximum of $6,370,268.75 on May 1, 1933, but this has been reduced to $2,956,180.00 since that time.

As stated in the last two reports to the Court, because the local tax situation was not likely to improve sufficiently in the near future to enable the payment of bonds in default, from the receipt of taxes, and thus make the Sanitary District bonds marketable, the Sanitary District negotiated with the Federal Emergency Administration of Public Works two agreements, dated December 16, 1933, under which the Public Works Administration purchased bonds of the Sanitary District in the principal amount of $41,938,000, at par plus accrued interest.

Because of certain changes in sequence in the construction program recommended by both the Sanitary District and the Engineering Board (PWA), negotiations have been undertaken with the Public Works Administration on an amended agreement, which would set forth the changes in procedure and the necessary re-allocation of funds for this work. Conferences were held with representatives of the Public Works Administration in the latter part of June, 1934 and again in October, 1934, and the provisions of the amended agreement have been determined. This agreement has not yet been officially

executed but work is now proceeding according to the new allocations provided in it.

Since the time of the agreement of December 16, 1933, construction work has been resumed or started on 19 contracts, which apparently will cost $15,500,000. Bids have been received for three other contracts, which are estimated to cost $2,800,000. Plans will be completed within the next two months for two additional contracts, estimated to cost $6,100,000. All of these contracts will amount to $24,400,000 out of the total of $41,938,000 obtained from the Federal Emergency Administration of Public Works.

The total work accomplished by The Sanitary District of Chicago in the construction of sewage treatment works during the period from June 1, 1934 (the date of the summaries for the last report) to December 1, 1934 (the date of the summaries for this report) as measured by construction expenditures was, as follows:

TABLE 3.

Calumet Project	$2,526,935.78
West Side Project	2,890,932.30
Southwest Side Project	32,408.97
West-Southwest Treatment Plant	69,940.04
Total	$5,520,217.09

In addition to the amounts shown in Table 3, approximately $787,000 had been earned by contractors up to December 1, 1934, on the various items of work but is retained by the Sanitary District as reserved percentage until the final completion of the contracts. During the month of December, payments aggregating approximately $1,320,000 were paid for contract work. This will appear in the cost summaries of the next report to the Court.

By adding the various items indicated in Table 3 to corresponding items in Table 1, the completed por-

tion of the sewage treatment construction program on December 1, 1934, is as follows:

TABLE 4.

COMPLETED WORK AS OF DECEMBER 1, 1934.

Calumet Project	$ 24,085,344.90
North Side Project	37,122,381.52
West Side Project	45,279,919.83
Southwest Side Project	358,614.68
West-Southwest Treatment Plant	228,940.21
Miscellaneous Plants and Sewers	596,188.86
Chicago River Controlling Works	53,415.74
Total	$107,724,805.74

Because of the extremely low construction prices prevailing during the past year, there has been a considerable saving on the work placed under contract in 1934, particularly on the Calumet Sewage Treatment Works and the West Side Intercepting Sewers. The Engineering Board (PWA) recommended that the Southwest Side sewers and certain units of the Southwest Sewage Treatment works be constructed to less ultimate capacity than originally planned. This fact and late developments in the sludge dewatering and incinerating process necessitated a new, up to date estimate of the entire Southwest Side Project. The net result of the contract letting and the re-estimates are an indicated saving of $7,525,000.00 on the entire construction program.

The estimated cost of future sewage treatment construction, as of December 1, 1934, is, as follows:

TABLE 5.

FUTURE WORK AFTER DECEMBER 1, 1934.

Calumet Project	$ 11,544,000.00
North Side Project	5,375,000.00
West Side Project	8,947,000.00
Southwest Side Project	39,561,000.00
West-Southwest Treatment Plant	35,278,000.00
Miscellaneous Plants and Sewers	2,000,000.00
Chicago River Controlling Works	3,200,000.00
Total	$105,905,000.00

The balance remaining of the funds obtained from the Public Works Administration amounts to $35,837,000, leaving $70,068,000 of the future work to be financed from other sources. The Sanitary District of Chicago, at the present time, has no resources for this work.

In December, 1933, when the agreements with the Public Works Administration were being negotiated, the debt incurring capacity of the Sanitary District of Chicago was $183,183,629, being 5 per cent of the assessed valuation $3,663,672,580 for the year 1931 of all the property within the District. The bonds then sold to the Public Works Administration, coupled with the already outstanding bonds and other contractual obligations of the Sanitary District, utilized practically all its debt incurring capacity. If this transaction had not been completed promptly, before the assessed valuations for the year 1932 were in effect, the deal could not have been consummated, because the Sanitary District would not have had sufficient debt incurring capacity. The assessed valuation for the year 1932 (on which taxes were collected in the spring and summer of 1934), was $2,877,336,389 and the debt incurring capacity of the Sanitary District was $143,866,819. The assessed valuation of all the property within the Sanitary District for the year 1933 (on which taxes have been extended within the past month) amounts to $2,774,-937,248, reducing the debt incurring capacity of the Sanitary District to $138,746,862 as of the present time. The presently outstanding bonds of the Sanitary District amount to $143,420,055. Construction contractual obligations, not payable from funds derived from the PWA, amount to $438,000 and judgments amount to $153,000. In addition to obligations

under the contract for purchase of power, obligations for rent, etc., the Sanitary District has today outstanding obligations of upwards of $144,000,000, with a debt incurring capacity of $138,746,862. Aside from the funds obtained by sale of bonds to the Public Works Administration, which are strictly allocated to certain projects in the sewage treatment construction program, estimated to cost $35,837,000, there is now a deficit of more than $5,000,000 in the debt incurring capacity of the Sanitary District. This situation can not be corrected until collection of taxes improves sufficiently to permit the redemption of outstanding bonds ($16,512,555 of which are in default) or until an increase in the assessed valuation of property brings about a resultant increase in the debt incurring capacity of the Sanitary District. It is practically certain that neither of these expedients will make available any important amount of revenue in time to enable the financing of the estimated $70,068,000 balance of the sewage treatment construction program by the end of 1938.

In order to obtain funds, sufficient to finance the remainder of this construction the Sanitary District of Chicago has been endeavoring to bring about the purchase by the Federal Government of the waterway improvements applicable to navigation made by the Sanitary District in the South Branch of the Chicago River, the Little Calumet River, the Main Channel and the Calumet-Sag Channel. A resolution initiating steps toward this purchase, introduced in the House of Representatives March 27, 1934 (H. J. Res. No. 308, Seventy-third Congress, 2nd Session) was referred to the Committee on Rivers and Harbors. This Committee, by resolution, after a hearing

on June 15, 1934, referred the matter to the War Department for report.

At a public hearing in the office of the United States District Engineer in Chicago, December 19, 1934, the Sanitary District presented a formal written statement supported by oral testimony of its officers setting forth the facts that it had improved these natural streams and constructed these artificial channels in a manner to provide equal facility for navigation and for the disposal of sewage by dilution; that this system of channels was constructed with a nominal capacity of 10,000 cubic feet per second of water for the dilution of sewage; that after December 31, 1938, the diversion of water from Lake Michigan through these channels was to be reduced, under the Supreme Court decree, to an annual average of 1,500 cubic feet per second and their value to the Sanitary District for the dilution of sewage thereby greatly diminished; that their value for navigation, connecting the waterways of the Mississippi River System with the Great Lakes System was not thereby impaired; that under the Rivers and Harbors Act of July 3, 1930 these channels had been taken over by the War Department, without compensation; that the 1934 reproduction cost of the navigation improvements in said channels was estimated at $90,607,173; that since the national purpose of these channels (navigation) was to be unimpaired and their local purpose (disposal of sewage) greatly diminished, the local taxpayers were entitled to reimbursement for the investment they had made, to the end that the taxpayers' funds so reimbursed by reason of this sale might be applied to the purpose for which it was originally intended, namely, disposal of sewage. The Sanitary District pledged itself to use whatever

money might be obtained, from the sale of its rights in these channels, for the construction of sewage disposal facilities. At this Public Hearing the representatives of the Attorneys General of the States of Ohio, Minnesota, Michigan and Wisconsin appeared in opposition to the purchase of these channels by the Government. A continuance of this Public Hearing was obtained by the representatives of the Lake States until January 15, 1935, at which time a formal statement of their position is to be presented. This action will delay the early consideration of the matter by the War Department and possibly by Congress.

SEWAGE TREATMENT.

The population of The Sanitary District of Chicago, as of January 1, 1935, is about 4,312,000, according to estimates made from the figures of the 1930 census. The industrial wastes in the Sanitary District are assumed to be equivalent to the sewage of 1,738,000 additional persons. Hence, the total population and industrial wastes equivalent amount to 6,050,000. This figure includes the Corn Products wastes, equivalent to the sewage of 371,000 persons, which wastes have been greatly reduced, as a result of certain experimental work initiated by the Sanitary District.

The 1935 total population, and industrial waste equivalent, as above indicated, are estimated as 6,050,000. Up to date, the Sanitary District has assumed that sewage treatment could produce an annual average of 85 per cent purification. Hence, so-called complete treatment for the total January 1, 1935, population and industrial wastes equivalent would equal the 100 per cent treatment of the sewage of 5,142,000, which is 85 per cent of 6,050,000.

The expenditures for sewage treatment have been indicated in Tables 1, 3 and 4. The amounts of actual sewage treatment in operation on June 25, 1934 (as of the time of the last report to the Supreme Court) and at the present time are shown in Tables 6 and 7, following:

TABLE 6.

ACTUAL SEWAGE TREATMENT IN OPERATION AS OF JUNE 25, 1934.

Treatment Works	Population Equivalent	Percentage Treatment	Treatment 100 Per Cent Basis
Calumet:			
(Complete treatment)	15,000	85	13,000
(Sedimentation)	219,000	33⅓	73,000
North Side	1,133,000	85	963,000
West Side (Sedimentation)..	763,000	33⅓	254,000
Miscellaneous (Morton Grove, Glenview, Northbrook) ...	7,000	85	6,000
Corn Products (Reduction)..	398,000		303,000
Total.....	2,535,000		1,612,000

TABLE 7.

ACTUAL SEWAGE TREATMENT IN OPERATION AS OF DECEMBER 24, 1934.

Treatment Works	Population Equivalent	Percentage Treatment	Treatment 100 Per Cent Basis
Calumet:			
(Complete treatment)	15,000	85	13,000
(Sedimentation)	224,000	33⅓	74,000
North Side	1,150,000	85	977,000
West Side (Sedimentation)..	770,000	33⅓	257,000
Miscellaneous (Morton Grove, Glenview, Northbrook) ...	7,000	85	6,000
Corn Products (Reduction)..	371,000		284,000
Total.....	2,537,000		1,611,000

The extent of the operation of sewage treatment plants at the present time is equal to the 100 per cent treatment of the sewage of 1,611,000 out of 5,142,000 persons, which would be the present possible 100 per cent treatment if the sewage of the total population

and industrial wastes equivalent of 6,050,000 were being treated. This indicates the actual treatment of approximately 31.4 per cent of the total sewage within the Sanitary District, although considerable additional construction work has been performed during this period, for which no credit will be taken in this percentage until the works are completed and put in operation.

DIVERSION OF WATER.

The net diversion of water from Lake Michigan, during the calendar year 1933, averaged 6,270 cubic feet per second. The domestic pumpage of the Chicago metropolitan area during this period averaged 1,690 cubic feet per second; the inflow from the Des Plaines River at Willow Springs averaged 45 cubic feet per second and the total flow from the Main Channel at Lockport averaged 8,005 cubic feet per second.

Diversion of water from Lake Michigan by the Sanitary District of Chicago since July 1, 1930, has been made in accordance with a Permit from the Secretary of War, dated June 26, 1930, which authorized the diversion of water as specified in the Decree of the Supreme Court, handed down April 21, 1930. This limits the net diversion to an annual average of not more than 6,500 cubic feet per second up to December 31, 1935. The average monthly diversion as made under this Permit from January 1 to December 20, 1934, is indicated in the table following:

Month 1934	Total Flow From Main Channel At Lockport C.F.S.	Inflow From Willow Springs Spillway C.F.S.	Domestic Pumpage Chicago Metropolitan Area C.F.S.	Net Diversion From Lake Michigan C.F.S.
January	7281	0	1598	5683
February	7144	0	1617	5527
March	7004	0	1599	5405
April	7955	0	1588	6367
May	8413	0	1738	6675
June	8762	0	1792	6970
July	8710	0	1886	6824
August	8700	0	1839	6861
September ..	8657	0	1726	6931
October	8239	0	1699	6540
November ...	8266	0	1616	6650
Dec. 1 to 20..	8325	0	1600	6725
Average	8121	0	1691	6430

All of which is respectfully submitted,

THE SANITARY DISTRICT OF CHICAGO,

By ROSS A. WOODHULL,
President.

PHILIP HARRINGTON,
Chief Engineer.

WILLIAM ROTHMANN,
Attorney.

Attest:

JAMES J. SULLIVAN,
Clerk.